



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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In re the application of: Lonnie O. Ingram, *et al.*

Serial No.: 10/001218

Filed: November 30, 2001

For: *ETHANOL PRODUCTION IN GRAM-POSITIVE MICROBES*

Attorney Docket No.: 49950-59824CON4 (formerly BCI-009C3C4CN)

Group Art Unit: 165

Examiner: Saidha, T.

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Certificate of First Class Mailing (37 CFR §1.8(a))

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date set forth below.

January 27, 2004

Date of Signature and of Mail Deposit

By:

Peter C. Lauro, Esq.
Registration No. 32,360
Attorney for Applicants

INFORMATION DISCLOSURE STATEMENT

Dear Sir:

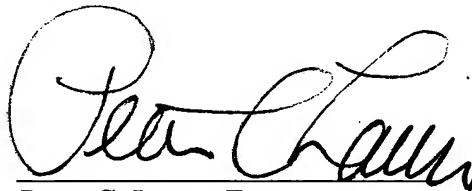
For the Examiner's convenience in reviewing this continuation application, Applicants submit a consolidated PTO Form 1449, listing all references cited during the prosecution of the parent application. References A1-B12 were previously cited and submitted to the Office in U.S. Application Serial No. 09/290463, filed April 12, 1999 (Atty. Docket No. BCI-009C3C4) of which this application is a continuation and to which this application claims priority. In accordance with 37 CFR §1.98(d), these references are not enclosed herewith, but

will be provided upon request. In addition, this Information Disclosure Statement presents references C1-C14, not previously submitted to the Office, and copies of these references are submitted herewith.

This statement is not to be interpreted as a representation that the cited publications are material, that an exhaustive search has been conducted, or that no other relevant information exists. Nor shall the citation of any publication herein be construed *per se* as a representation that such publication is prior art. Moreover, Applicants understand that the Examiner will make an independent evaluation of the cited publications.

Pursuant to 37 CFR § 1.97(c)(2), Applicants enclose a check covering the \$180.00 fee required by 37 CFR § 1.17(p). Please charge any additional fee or credit any overpayment to our Deposit Order Account No. 04-1105.

Respectfully submitted,
LAHIVE & COCKFIELD, LLP

A handwritten signature in black ink, appearing to read "Peter Lauro", written over a horizontal line.

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Date: January 27, 2004

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Enclosures

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ATTY DOCKET NO

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 LIST OF PUBLICATIONS CITED BY APPLICANT
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U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	IF APPROPRIATE
A1	4,493,893	1/85	Mielenz et al.	435	172.3	

FOREIGN PATENT DOCUMENTS

DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO

OTHERS (including Author, Title, Date, Pertinent Pages, Etc.)

A2	Barbosa, et al., <i>Current Microbiol.</i> 28:279-282 (1994)
A3	Beall, D.S. et al. (1993) "Genetic engineering of soft-rot bacteria for ethanol production from lignocellulose" <i>J. Ind. Microbiol.</i> 11:151-55.
A4	Breau, B. et al. (1986) "Cloning and expression of the structural gene for pyruvate decarboxylase of <i>Zymomonas mobilis</i> in <i>Escherichia coli</i> " <i>Arch. Microbiol.</i> 144:296-301.
A5	Bringer-Meyer, S. et al. (1986) "Pyruvate decarboxylase from <i>Zymomonas mobilis</i> . Isolation and partial characterization" <i>Arch. Microbiol.</i> 146:105-110.
A6	Brock, et al., <i>Biology of Microorganisms</i> , 4 th Edition, Prentice-Hall, Inc., Englewood Cliffs, N.J., 1984, pp. 803-805.
A7	Coleman, et al., <i>J. Bacteriol.</i> 169:4302-4307 (1987)
A8	Conway T, et al. Cloning and Expression of Ethanologenic and Glycolytic Genes form <i>Zymomonas mobilis</i> in <i>E. coli</i> Abstracts. Of the Annual Meeting of the American Society for Microbiology 1987: pp. 159
A9	Conway, T. et al. (1987) "Cloning and sequencing of the Alcohol Dehydrogenase II gene from <i>Zymomonas mobilis</i> " <i>Journal of Bacteriology</i> 169(6):2591-7.
A10	Danilevich, et al., <i>Molecular Biology</i> 28:158-166 (1994)
A11	Gold, et al., <i>J. Ind. Microbiol.</i> 10:45-54 (1992)
A12	Gong, C-S. et al. (1981) "Production of ethanol from D-Xylose by using D-Xylose isomerase and yeasts" <i>Applied and Environmental Microbiology</i> 41(2):430-6.
A13	Hashiba, et al., <i>Biosci. Biotech. Biochem.</i> 56:190-194 (1992)
A14	Ingram, L.O. et al. (1987) "Genetic engineering of ethanol production in <i>Escherichia coli</i> " <i>Applied and Environmental Microbiology</i> 53(10):2420-25.
A15	Ingram, L.O. et al. (1988) "Expression of different levels of ehtanologenic enzymes from <i>Zymomonas mobilis</i> in recombinant strains of <i>Eschirichia coli</i> " <i>Applied and Environmental Microbiology</i> 54(2):397-404.

Examiner	Date Considered
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

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	A16	Ingram, L.O. et al., "Genetic Engineering of Ethanol Production in <i>Escherichia Coli</i> ," Appl. Environ. Microbiol. 53(10):2420-2425 (Oct. 1987);
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OTHERS (including Author, Title, Date, Pertinent Pages, Etc.)

	B1	Koide, Y. et al. (1986) "Cloning and sequencing of the major intracellular serine protease gene of <i>Bacillus subtilis</i> " <i>Journal of Bacteriology</i> 167(1):110-6.
	B2	Lawford, et al., Appl. Biochem. Biotechnol. 28/29:221-236 (1991)
	B3	Mistry, F.R. et al. (1989) "Production of ethanol by <i>Clostridium thermosaccharolyticum</i> : I. Effect of cell recycle and environmental parameters" <i>Biotechnology and Bioengineering</i> 34:1295-304.
	B4	Mistry, F.R. et al. (1989) "Production of ethanol by <i>Clostridium thermosaccharolyticum</i> : II. A quantitative model describing product distributions" <i>Biotechnology and Bioengineering</i> 34:1305-20.
	B5	Neale, A.D. et al. (1987) "Nucleotide sequence of the pyruvate decarboxylase gene from <i>Zymomonas mobilis</i> " <i>Nucleic Acids Research</i> 15(4):1753-61.
	B6	O'Hara, M.B. et al. (1990) "Energy and calcium ion dependence of proteolysis during sporulation of <i>Bacillus subtilis</i> cells" <i>Journal of Bacteriology</i> 172(8):4161-70.
	B7	Panbanged, et al., Appl. Microbiol. Biotechnol. 22:259-264 (1985)
	B8	Sarthy, A.V. et al. (1987) "Expression of the <i>Escherichia coli</i> xylose isomerase gene in <i>Saccharomyces cerevisiae</i> " <i>Applied and Environmental Microbiology</i> 53(9):1996-2000.
	B9	Sneath et al., Eds., Bergey's Manual of Systematic Biology, Vol. 2, Williams & Wilkins, Baltimore, MD, 1986, pp. xxi-xxiii
	B10	Tolan, J.S. et al. (1987) "Fermentation of D-Xylose and L-Arabinose to ethanol by <i>Erwinia chrysanthemi</i> " <i>Applied and Environmental Microbiology</i> 53(9):2033-8.
	B11	Tolan, J.S. et al. (1987) "Fermentation of D-Xylose to ethanol by genetically modified <i>Klebsiella planticola</i> " <i>Applied and environmental microbiology</i> 53(9):2039-44.
	B12	Wood, B.E. (1992) "Ethanol production from cellobiose, amorphous cellulose, and crystalline cellulose by recombinant <i>Klebsiella oxytoca</i> containing chromosomally integrated <i>Zymomonas mobilis</i> genes for ethanol production and plasmids expressing thermostable cellulase genes from <i>Clostridium thermocellum</i> " <i>Applied and environmental microbiology</i> 58(7):2103-10.

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C1	4,612,287	09/86	Coleman et al.	435	172.3	
C2	4,839,286	06/89	Backman	435	108	

FOREIGN PATENT DOCUMENTS

DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION
					YES NO

OTHERS (including Author, Title, Date, Pertinent Pages, Etc.)

C3	Alterthum, F. et al. "Efficient ethanol production from glucose, lactose, and xylose by recombinant <i>Escherichia coli</i> ." <i>Applied And Environmental Microbiology</i> 55(8):1943-8 (1989)
C4	Al-Zaag, A. "Molecular cloning of cellobiose and other β -glucosidase determinants from <i>Klebsiella oxytoca</i> ," <i>J. Biotechnol.</i> 12:79-86 (1989)
C5	Conway, T. et al. "Expression vector for <i>Zymomonas mobilis</i> ," <i>Appl. Environ. Microbiol.</i> 53(2):235-241 (Feb. 1987)
C6	Cornet et al. "Characterization of two <i>cel</i> (cellulose degradation) genes of <i>Clostridium thermocellum</i> coding for endoglucanases" <i>Bio/Technology</i> 1:589-594 (Sep. 1983)
C7	Curry, C. et al. "Expression and Secretion of a <i>Cellulomonas fimi</i> Exoglucanase in <i>Saccharomyces cerevisiae</i> ," <i>Applied And Environmental Microbiology</i> , 54(2):476-484 (1988)
C8	Grépinet, O. et al. "Purification of <i>Clostridium thermocellum</i> xylanase Z expressed in <i>Escherichia coli</i> and identification of the corresponding product in the culture medium of <i>C. thermocellum</i> ." <i>J Bacteriol.</i> 170(10):4576-81 (1988)
C9	Grépinet, O. et al. "Nucleotide sequence and deletion analysis of the xylanase gene (<i>xynZ</i>) of <i>Clostridium thermocellum</i> ," <i>J. Bacteriol.</i> 170(10):4582-4588 (Oct. 1988)
C10	Joliff, G. et al., "Isolation, crystallization and properties of a new cellulase of <i>Clostridium thermocellum</i> overproduced in <i>Escherichia coli</i> ," <i>Bio/Technology</i> 4:896-890 (Oct. 1986)
C11	Kotoujansky, A, et al. "Molecular cloning of <i>Erwinia chrysanthemi</i> pectinase and cellulase structural genes" <i>The EMBO Journal</i> 4(3):781-785 (1985)
C12	Millet, J. et al. "Cloning of ten distinct DNA fragments of <i>Clostridium thermocellum</i> coding for cellulases," <i>FEMS Microbiol. Lett.</i> 29:145-149 (1985)
C13	Pétre, D. et al. "Purification and Properties of the endoglucanase C of <i>Clostridium thermocellum</i> produced in <i>Escherichia coli</i> ," <i>Biochimie</i> 68:687-695 (1986)
C14	Tailliez, P. et al. "Cellulose fermentation by an asporogenous mutant and an ethanol-tolerant mutant of <i>Clostridium thermocellum</i> ," <i>Appl. Environ. Microbiol.</i> 55(1):203-206 (Jan. 1989);

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